

REMARKS

This Amendment is in response to the Office Action dated November 19, 2008 ("OA"). In the Office Action, claims 1-12 were rejected under both 35 U.S.C. § 112 and 35 U.S.C. § 103. By this Amendment, claims 6-8 are amended and claims 33-52 are added. Currently pending claims 1-12 and 33-52 are believed allowable, with claims 1, 33 and 41 being independent claims.

CLAIM REJECTIONS UNDER 35 USC §112:

Claims 1-12

Claims 1-12 were rejected under 35 U.S.C. § 112 as "failing to comply with the enablement requirement." OA, pp. 2. More specifically, the Examiner alleges,

Applicant's claim is drawn towards "application container sharing state information about its application instance with other application containers" and "calculating quality of service metrics for each application instance using a decentralized workload management layer based on the quality of service metrics," however no mention of the above recited limitations are disclosed in the specification. OA, pp. 2-3.

A. "each application container sharing state information about its application instance with other application containers"

Claim 1 recites, in part, "each application container sharing state information about its application instance with other application containers."

The Applicants respectfully submit that support for the claim language quoted above can be found in at least page 9, line 28 through page 10, line 8 of the specification. This passage of the specification states,

In one embodiment of the invention, application containers monitor metrics associated with QoS for each application it is executing. If the QoS falls below desired levels, the application container requests reassignment of work from the infrastructure. Upon reassignment of work, one or more application containers begin to execute application code and clients migrate to appropriate application containers. Moreover, although the application code itself runs on multiple application containers, the application code is itself unaware of the exact number of such containers being used, or of the pieces of the application code that are being managed on different containers. It is the job of each container to share appropriate state information about its portion of the application with other appropriate containers to ensure that the application logic remains consistent.

Further support for the claim language quoted above can be found in page 17, lines 27-31 of the specification. This passage of the specification states,

Additionally, the workload management layer 408 provides consistency control mechanisms that allow the same application 306 executing on separate application containers 404 the ability to communicate state information with each other and to appear as a single application instance.

Further support for the claim language quoted above can be found in page 25, lines 3-22 of the specification. This passage of the specification states,

Once the request is forwarded, control flow passes to query operation 908, where the application container checks the work assignment to see if other application containers should be informed of any results such as state changes in the application. If the results do not need to be shared with other application containers, control passes to waiting operation 910.

If, at query operation 908, the results do need to be shared with other application containers, control passes to forwarding operation 912. In the example of an MMOG, this could correspond to two application containers running game

code for the same game, where each one has a work assignment for different halves of the virtual world map. However, at the shared boundary of their work assignments, there is some overlap and both application containers can respond to client requests that affect these areas. To keep both executing applications consistent, it may be necessary for the local application to forward changes to the remotely executing application. This is reflected at forwarding operation 912, where shared state on the local application container is forwarded to a remote application container. Once the forwarding operation 912 is completed, control passes to waiting operation 910.

B. "calculating quality of service metrics for each application instance using a decentralized workload management layer based on the quality of service metrics"

The Examiner alleges that "calculating quality of service metrics for each application instance using a decentralized workload management layer based on the quality of service metrics" is not enabled by the specification. The Applicants respectfully submit that claims 1-12 do not recite such limitations.

To the contrary, claim 1 recites "calculating quality of service metrics for each application instance by the application containers" and "distributing application workload among the application instances using a decentralized workload management layer based on the quality of service metrics."

Because claims 1-12 do not recite the language quoted by the Examiner, it is irrelevant to the patentability of the instant invention whether support for the quoted language is found in the specification. For this reason, the Examiner's argument is believed moot.

C. "calculating quality of service metrics for each application instance by the application containers"

Claim 1 recites, in part, "calculating quality of service metrics for each application instance by the application containers."

The Applicants respectfully submit that support for the claim language quoted above can be found in at least page 9, lines 28-30 of the specification. This passage of the specification states,

In one embodiment of the invention, application containers monitor metrics associated with QoS for each application it is executing.

Moreover, page 9, lines 19-22 of the specification state, "The application container is responsible for executing arbitrary application code and providing an interface to a middleware infrastructure that provides quality of service (QoS) functions common to applications." It is thus evident that "QoS", as the term is used in the specification, is an acronym for "quality of service".

Further support for the claim language quoted above can be found in page 30, lines 3-12 of the specification. This passage of the specification states,

Fig. 12 is an exemplary flowchart illustrating how an application container reports its load to the workload management layer. Control flow starts at collecting operation 1202, where the application container collects metrics regarding QoS for each of its applications. An example QoS metric could be the time it takes to process a client request. It may also be the number of outstanding client requests that are buffered and awaiting processing, or the number of lower-level disk memory requests. It should be noted that the metric used is not limited to the examples discussed. Once the metrics are collected, control passes to sending operation 1204.

For at least these reasons, claims 1-12 are believed allowable. The Applicants respectfully request reconsideration and allowance of claims 1-12.

CLAIM REJECTIONS UNDER 35 USC §103:

Claims 1-12 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Application Publication No. US 2003/0005028 ("Dritschler") in view of U.S. Patent No. 7,254,634 to Davis et al. ("Davis"). OA, pp. 4.

Claims 1-12

Applicants observe that the Examiner has cited the disclosure of Dritschler in the outstanding Office Action. The Dritschler reference is disqualified as prior art for the following reason:

Insofar as the § 103 rejections are concerned, the Applicants submit that the statute under 35 U.S.C. § 103(c) states,

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.
35 U.S.C. § 103(c)

Applicants submit that the Dritschler reference was applied by the Examiner as prior art under 35 U.S.C. § 103 via 35 U.S.C. § 102(e). Applicants note in this regard that MPEP § 706.02(k) states, "Effective November 29, 1999, subject matter which was

prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) was disqualified as prior art against the claimed invention if that subject matter and the claimed invention 'were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.'" MPEP § 706.02(k).

This change to 35 U.S.C. § 103 is applicable to all utility, design, and plant applications filed on or after November 29, 1999 including continued prosecution applications (CPA) filed under 37 C.F.R. § 1.53(d). Applicants note that the present application was filed on March 16, 2004. Therefore the present application is entitled to the above change in 35 U.S.C. § 103.

To evidence that the instant application and Dritschler "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person", the assignment document of the present application (recordation date June 17, 2004 at Reel 014742, Frame 0248) was compared with the recorded assignment of Dritschler (recordation date June 26, 2002 at Reel 013062, Frame 0826). In both instances, the inventors conveyed their entire interest to International Business Machines Corporation; therefore establishing common ownership between the instant application and Dritschler.

In view of the above information, Dritschler is disqualified as a reference under 35 U.S.C. § 103(c). Applicants submit, in this regard, that Davis by itself does not make the claimed invention obvious since the applied reference does not teach or suggest the claimed limitations as recited in the claims of the present application.

Based on the foregoing, favorable reconsideration and allowance of claims 1-12 of the present application are respectfully requested.

NEW CLAIMS:

Claim 33

By this Amendment, claim 33 is added. Claim 33 recites subject matter which is substantially similar to claim 13 as originally presented.

Claim 33 additionally recites, "share state information about its application instance with other application containers." Support for this claim limitation can be found in at least page 9, line 28 through page 10, line 8; page 17, lines 27-31 and page 25, lines 3-22 of the specification.

Claims 34-40

By this Amendment, claims 34-40 are added. Claims 34-40 recite subject matter which is substantially similar to claims 14-20 as originally presented.

Claim 41

By this Amendment, claim 41 is added. Claim 41 recites subject matter which is substantially similar to claim 21 as originally presented.

Claim 41 additionally recites, "each application container sharing state information about its application instance with other application containers." Support for this claim limitation can be found in at least page 9, line 28 through page

10, line 8; page 17, lines 27-31 and page 25, lines 3-22 of the specification.

Claims 42-52

By this Amendment, claims 42-52 are added. Claims 42-52 recite subject matter which is substantially similar to claims 22-32 as originally presented.

CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should such a fee be required please charge Deposit Account 50-0510 the required fee. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

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Respectfully submitted,

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